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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/322,663	05/28/1999	WILLIAM H. SHEPARD	05918/133001	8336

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EXAMINER
BEFUMO, JENNA LEIGH

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-86

Office Action Summary	Application No.	Applicant(s)	
	09/322,663	SHEPARD ET AL.	
	Examiner	Art Unit	
	Jenna-Leigh Befumo	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 March 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6,7,11 and 13-109* is/are pending in the application.

4a) Of the above claim(s) *22-86,90-98 and 102-109* is/are withdrawn from consideration.

5)☒ Claim(s) *20* is/are allowed.

6)☒ Claim(s) *1-4,6,7,11,13-19,21,87-89 and 99-101* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *17* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 6, 2003 has been entered.

Response to Amendment

2. Amendment D, submitted as Paper No. 23 on January 6, 2003, has been entered. Claim 9 has been cancelled. Claims 1 – 4, 6, 7, 11, 13 – 21 and 87 – 89 have been amended and claims 90 – 98 have been added.

3. Amendment E, submitted as Paper No. 25 on March 11, 2003, has been entered. Claim 98 has been amended and claims 99 – 109 have been added. Therefore, the pending claims are 1 – 4, 6, 7, 11, and 13 – 109.

4. Newly added claims 90 – 98 and 102 – 109 are drawn to a hook-engagable material, similar to the article recited in claims 49 – 61 which were restricted in the Office Action dated March 29, 2001. Thus, claims 90 – 98 and 102 – 109 are grouped with claims 49 – 61 and are withdrawn from further consideration as being drawn to a non-elected invention. Claims 22 – 48 and 61 – 86 are also withdrawn from consideration as being drawn to a nonelected invention.

5. The double patenting objection to claims 87 set forth in section 6 of the previous Office Action is withdrawn since the Applicant has amended the claim.

6. The 35 USC 103 rejections based on Nemec et al. (6,010,387), Lawless (5,891,547), and Shepard et al. (WO 99/11452) set forth in sections 8 – 10 of the previous Office Action are withdrawn since the prior art fail to teach specifically using a dye-based printing system which are now positively claimed in the independent claims 1, 2, 87, and 99 – 101. However, a new rejection based on these references is set forth below.

7. The declaration under 37 CFR 1.132 filed March 11, 2003 is insufficient to overcome the rejection of claims 1 – 4, 6, 7, 11, 13 – 19, 21, 87 – 89, and 99 – 101 based upon Shepard or Lawless and Nemec et al. because: The declaration set forth the opinion of the inventor that printing a light weight nonwoven loop surface would not be obvious to one of ordinary skill in the art since the idea did not occur to the Inventor until the invention was produced. While it is agreed that Mr. Shepard does have ample knowledge in hook and loop fasteners, Mr. Shepard's opinion that since it was not obvious to him to print on light weight nonwoven loop structures it would not be obvious to one of ordinary skill in the art is insufficient evidence to overcome the following rejection. The declaration does not provide strong evidence that it would not have been obvious to print the light weight nonwoven to those with skill in the hook and loop and printing art. Instead, the declaration only clearly establishes that it was not obvious to Mr. Shepard to apply a graphic design to the nonwoven fabric. Thus, the claims are still rejected as set forth below.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1 – 4, 6, 7, 11, 13 – 19, 21, 87 – 89, and 99 – 101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shepard et al. in view of Nemec et al., Akada et al. (4,923,848), Powell (5,603,504), Bricker (5,664,780), and Franz (5,224,895).

The features of Shepard et al. have been set forth in the previous Office Action. Shepard discloses a light weight nonwoven loop material for hook and loop fasteners. The nonwoven material is stretched and stabilized to produce spaced-apart loop clusters extending from taut fibers (abstract). Binder is added to the nonwoven to stabilize the structure (abstract). The nonwoven material has a basis weight of less than 4 oz/yd^2, preferably less than 2 oz/yd^2 (pages 1 – 2). While Shepard discloses that the loop product can be used in display systems (page 27), Shepard fails to teach that the structure of the display system.

The features of Nemec et al. have been set forth in the previous Office Action. Nemec et al. discloses a display system which comprises a display board and a covering member made from a hook or loop material so that additional hook or loop components can be placed on the display board. The display board comprises a lightweight rigid material such as a corrugated polymeric material (column 4, lines 15 – 25). Therefore, it would have been obvious to one of ordinary skill in the art to use a display board having a rigid corrugated board as taught by Nemec et al. with the loop material taught by Shepard et al. since Shepard et al. teaches the nonwoven material can be used in display boards.

Additionally, Shepard fails to teach printing the loop material. The features of Powell and Bricker have been set forth in the previous Office Action. Powell and Bricker discloses that it is know to apply graphic images to the loop material in hook and loop fasteners.

Akada et al. is drawn to image formation on any selected kind of body (abstract). Akada et al. discloses a method of printing which allows a sharp and clear image to be printed on a body regardless of the configuration (abstract). Akada et al. discloses that sublimation printing is used to produce a graphic design on any selected object including cards, clothes, transparent sheet, and papers (column 1, lines 5 – 13). The process forms a sharp and clear image of a desired pattern on a body having any shape and configuration and surface condition of any kind (column 2, lines 25 – 30). The image can be applied to structures with uneven and complicated surfaces, have undulations, convexities, cavities, recesses, and projections (column 16, lines 40 – 47). Further, the image is transferred easily to the product and in a uniform manner producing no raised or thickened feeling (column 16, lines 52 – 55). Finally, Akada et al. discloses the process is highly recommendable in the decorative image transfer onto rough surface products, such as those of rough fabrics, woven or non-woven, knitted clothes, meshed or the like, creating a high quality image in spite of the undulating surface conditions (column 32, lines 53 – 59).

Therefore, it would have been obvious to one of ordinary skill in the art to use the sublimation printing process to apply a decorative image as taught by Akada et al. to the surface of the nonwoven loop material taught by Shepard since Akada et al. discloses this process can produce a high quality graphic image of the surface of undulation and rough surface products. Further, as evidenced by Powell and Bricker, it is well know to add graphic designs to the loop material in a hook and loop fastener so that the loop surface can be used as a background for various games or charts, or so that the loop material will provide an aesthetically pleasing surface to which a hook fastener is attached. Thus, claims 1 – 4, 6, 7, 11, 13, 15 – 19, 21, 88, 89, 99, and 100 are rejected.

Finally, even though Shepard discloses the fabric can be used as a nonwoven loop material in a display system, Shepard fails to teach what type of material is used to make the display system. Franz is drawn to a display system. Franz discloses that the display system can be made from durable plastic or paper materials of any desired thickness or strength (column 4, lines 10 – 16). Therefore, it would have been obvious to one having ordinary skill in the art to choose a display system made from paper, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. One of ordinary skill would choose paper, since paper is light-weight, easy to carry around, readily available, and inexpensive. Therefore, claims 14, 87, and 101 are rejected.

10. Claims 1 – 4, 6, 7, 11 – 13, 15 – 19, 21, 88, 89, 99, and 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawless in view of Nemec et al., Akada et al., Powell, and Bricker.

The features of Lawless have been set forth in the previous Office Action. Lawless discloses a lightweight nonwoven loop fabric produced by needle-punching fibers to form a plurality of loops (abstract). The fabric has a basis weight of 1.5 to 4.0 oz/yd^2 (abstract). The nonwoven material is produced by needle-punching which creates high and low density areas throughout the material (column 1, lines 39 – 40). The needle-punched fabric would inherently have some straightened fibers. A binder is added to the fabric to impart dimensional stability (column 3, lines 42 – 44). Lawless discloses the nonwoven material is made by an efficient and cost-effective process (column 3, lines 37 – 39).

The features Nemec et al. have been set forth above. It would have been obvious to one having ordinary skill in the art to use a corrugated board as a substrate for the nonwoven hook-engageable material taught by Lawless since the board will provide support to the nonwoven material during use, and it is lightweight and durable. Attaching the Lawless nonwoven material to the plastic substrate will also increase the marketability of the loop material.

Lawless fails to teach applying a graphic image. The features of Akada et al, Powell, and Bricker have been set forth above. It would have been obvious to one of ordinary skill in the art to apply the a printed graphic as taught by Akada et al to the nonwoven fabric taught by Lawless et al. since Akada et al. discloses that the printing method can be applied to any rough surface and produce a sharp and clear image. Also, as evidenced by Powell and Bricker it is well known to apply graphic images to loop materials to increase the uses of the loop material and make the fabric more aesthetically pleasing.

Further, it would have been obvious for one having ordinary skill in the art to attach the nonwoven material to the substrate while it is in a stretched or taut position to produce a planar surface and to prevent the material from being easily pulled off of the substrate when the releasably attached pieces are removed from the material. Therefore, claims 1, 2, 4, 6, 11 – 13, 15 – 19, 21, 88, 89, 99, and 100 are rejected.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the binder in the claimed range, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Adding more binder would help to

increase the bond strength of the fibers and increase the durability of the fabric. Therefore, claim 3 is rejected.

Additionally, Lawless discloses that the weight and transparency of the fabric directly relate to the needle-punching process (column 4, lines 4 – 16). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the claimed ratio of high areal density to low areal density, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It would be obvious to optimize the needle-punch process, to produce a transparent, low weight fabric with the necessary strength and loops produced for the material to act as a hook-engageable fabric. Therefore, claim 7 is rejected.

11. Claims 1, 2, 6, 11 – 19, 21, 88 – 90, and 99 – 101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nemec in view of Lawless, Akada et al., Franz, Powell, and Bricker.

The features of Nemec et al. and Lawless have been set forth above. Nemec et al. fails to teach the structure of the loop material in the display system. Lawless is drawn to a hook-engageable material. Lawless discloses the nonwoven material is made by an efficient and cost-effective process (column 3, lines 37 – 39). Thus, it would have been obvious to one having ordinary skill in the art to substitute the loop material taught by Lawless for the loop material on the display system of Nemec et al. because the Lawless loop material easily engages with hook fasteners and is more cost-effective than knit or woven loop fabrics.

Further, Nemec et al. fails to teach applying a graphic image. The features of Akada et al, Powell, and Bricker have been set forth above. As evidenced by Powell and Bricker it is well known to apply graphic images to loop materials. Further, Akada et al. teaches that a clear

image can be provided to rough fabric surfaces by sublimation printing. Therefore, it would have been obvious to one having ordinary skill in the art to apply a graphic image as taught by Akada et al. to the hook-engageable material in the display system taught by Nemec et al. to increase the figures and scenes that can be created by the attachable pieces and to improve the ability of the display to attract people when used in convention situations. Therefore, claims 1, 2, 6, 11 – 13, 15 – 19, 21, 88, 89, 99, and 100 are rejected.

Finally, Nemec fails to teach using a paper substrate. Franz is drawn to a display system. Franz discloses that while the preferred material is a durable plastic material additional materials which provide sufficient strength to prevent deformation such as paper of any desired thickness or strength may be substituted as desired (column 4, lines 10 – 16). Therefore, it would have been obvious to one of ordinary skill in the art to substitute a paper sheet or various thickness and strength for the durable plastic layer taught by Nemec since Franz discloses these material are equivalents. further, one of ordinary skill in the art would be motivated to use paper since paper is readily available, inexpensive, and bio-degradable. Therefore, claims 14, 87, and 101 are rejected.

Response to Arguments

12. Applicant's arguments filed January 11, 2003 have been fully considered but they are not persuasive. The Applicant argues that since the prior art references which taught the light weight nonwoven loop material did not teach printing this material it would not have been obvious to one of ordinary skill in the art to apply a graphic image to this material. The Applicant included a declaration by the inventor, William Shepard, which further stated in his opinion it was not obvious to him to apply a graphic image to the light weight nonwoven material when it was

originally invented. The Applicant argues that the fact that neither the Shepard and Lawless references address adding graphic images to the nonwoven material than this embodiment must be novel, and the rejections should be withdrawn.

13. First it is pointed out, that in the Applicant's response the Applicant agreed that it is well known to print on conventional loop material (page 11, paragraph 5). Thus, the Applicant agrees that printing conventional loop material is known. So the argument is whether printing this particular loop material is novel. In the last Office Action, it was the Examiner's position that the fact that a prior art reference does not teach a particular component is not sufficient evidence to conclude that adding this component is novel. This position is based on the fact that inventors are not required to set forth every possible embodiment or every obvious modification in the specification. Information which is well known in the art need not be described in detail in the specification. See, e.g., Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1379-80, 231 USPQ 81, 90 (Fed. Cir. 1986). Instead, the inventor is focused on describing the actual product and disclosing how to produce and use the product. For example, patents which are drawn to carpets or clothing fabrics do not always teach that the materials can be dyed or printed since it is well known to dye carpets and fabrics to make them more desirable to the consumer. Thus, the lack of a teaching to print the material is not sufficient evidence to overcome the obvious rejection. There is no suggestion in Shepard or Lawless that the materials cannot be printed. Hence, the fact that it is well known to apply graphic images to conventional loop material would indicate that it would be obvious to apply a graphic image to the light weight loop material as well. For the purposes of this rejection, the fact that Lawless and Shepard are

silent to possibility of printing on the nonwoven material neither supports nor opposes the argument that it is obvious to print a looped nonwoven fabric.

14. Thus, the Applicant's true argument would be drawn to the question of whether or not it would be obvious to print the light weight material due to the fact that the printing might interfere with the hook-engageability of the loop material. First it is noted, that while the Examiner does acknowledge that a heavy printing process has the potential to cover the loops extending from the surface, the Applicant has provided no evidence to this fact. Instead the Applicant arguments are drawn to the fact that printing is not mention in the prior art. The Applicant has not addressed specific reasons why one would not want to print on the light weight fabric. However, even if the Applicant argued effectively that screen printing processes would destroy the usefulness of the loop material, not all printing processes would have this effect. In fact, based on the rejection set forth above, which relies on Akada et al. to teach sublimation printing, there is no reason one having ordinary skill in the art would presume a) that the fabric couldn't be printed with sublimation printing and b) that the image printed on the fabric would interfere with the hook-engageability of the fabric. Further, Akada et al. suggests that any rough or uneven surface can be printed on. And not only will the print be clear, but also the image can be applied in a uniform manner without producing a raised or thickened area (column 16, lines 50 – 55). Thus, based on the teachings in Akada et al., one of ordinary skill in the art would have expect that the nonwoven can be successfully printed with sublimation printing and still function as desired. Therefore, the rejection is maintained.

Allowable Subject Matter

15. Claim 20 is allowed for the reasons of record.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (703) 605-1170. The examiner can normally be reached on Monday - Friday (9:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Jenna-Leigh Befumo
April 1, 2003

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